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P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER

PARRY, CHRISTOPHER L

ART UNIT	PAPER NUMBER
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2614

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/840,818	LU, JIN	
	Examiner	Art Unit	
	Chris Parry	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>04/24/01, 08/30/02</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: On page 13, line 16; "sand" should be --send--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bessel et al. "Bessel" (US 2002/0113119) in view of Margulis (US 6,263,503).

Regarding Claim 1, Bessel discloses a digital cable set-top box capable of being coupled to a television set, including adapter 100 or "a point of deployment (POD) module", which interfaces with port or receptacle 201 or "POD host interface" as illustrated in figure 10 (Page 4, ¶ 46). Bessel is silent on the POD module comprising an RF transceiver coupled to POD module interface. Margulis discloses in figure 6, RF XMIT/RCVR 640 or "RF transceiver" coupled to wireless base station 156 or "POD module interface". Margulis further teaches wireless base station 156 or "POD module interface" being capable of receiving an incoming baseband signal from switcher 138 or "digital cable set-top box" over path 154 (Col. 5, lines 1-10). Margulis discloses upconverting said baseband signal to an outgoing RF signal, and wirelessly transmitting

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said outgoing RF signal to remote TV 158 or “at least one wireless communication device” proximate said digital cable set-top box (Col. 5, lines 15-19). Margulis discloses wireless base station 156 is further capable of wirelessly receiving an incoming RF signal from remote TV 158 (or remote controller 310) or “at least one wireless communication device”, downconverting said incoming RF signal to an outgoing baseband signal, and transmitting said outgoing baseband signal to said digital cable set-top box (Col. 10, lines 43-57). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bessel with the teachings of Margulis in order to implement a POD module capable of sending and receiving packets wirelessly to at least one wireless communication device. One would have been motivated to make this modification in order to facilitate flexible viewing of television programming in multiple locations by providing an economically way to upgrade users' equipment (Background – Margulis).

As for Claim 2, Bessel is silent on adapter 100 receiving Internet protocol (IP) data packets. Margulis teaches base station subsystem 512 may communicate with various wide-area networks (such as the Internet) via WAN interface 656. For example, subsystem processor 518 may readily access digital A/V data from the Internet via path 656, WAN interface 658, path 660, communications processor 636, and path 522. Subsystem processor 518 may then process the Internet A/V data, and subsequently provide the processed Internet A/V data through path 522 to communications processor 636 for wireless transmission by RF XMIT/RCVR 640 (Col. 10, lines 23-32). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention

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was made to modify Bessel with the teachings of Margulis in order for incoming baseband signal and incoming RF signals to comprise Internet protocol (IP) data packets. One would have been motivated to make this modification in order to receive program information (EPG data) from the Internet while concurrently viewing said program.

Regarding Claim 13, Bessel discloses a digital cable set-top box capable of being coupled to a television set, including adapter 100 or “a point of deployment (POD) module”, which interfaces with port or receptacle 201 or “POD host interface” as illustrated in figure 10 (Page 4, ¶ 46). Bessel is silent on the POD module comprising an RF transmitter coupled to POD module interface. Margulis discloses in figure 6, transmitter 524 or “RF transmitter” coupled to wireless base station 156 or “POD module interface”. Margulis further teaches wireless base station 156 or “POD module interface” being capable of receiving an incoming baseband signal from switcher 138 or “digital cable set-top box” over path 154 (Col. 5, lines 1-10). Margulis discloses upconverting said baseband signal to an outgoing RF signal, and wirelessly transmitting said outgoing RF signal to remote TV 158 or “at least one wireless communication device” proximate said digital cable set-top box (Col. 5, lines 15-19). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bessel with the teachings of Margulis in order to implement a POD module capable of sending packets wirelessly to at least one wireless communication device. One would have been motivated to make this modification in order to facilitate flexible

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viewing of television programming in multiple locations by providing an economically way to upgrade users' equipment (Background – Margulis).

Considering Claim 14, the claimed elements of where incoming baseband signal comprises Internet protocol (IP) data packets, corresponds with subject matter mentioned above in the rejection of claim 2, and is likewise treated.

4. Claims 3-5, 9-12, 15-17, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bessel in view of Margulis as applied to claims 1 and 13 above, and further in view of Hendricks et al. "Hendricks" (US 5,990,927).

As for Claim 3, Bessel is silent on adapter 100 comprising a data processor and memory. Margulis teaches the use of subsystem processor 518, which preferably communicates with memory 646 via path 648. Memory 646 may be configured using any desired format, and may be utilized to store any information required by wireless television system 110, including various processing software instructions for subsystem processor 518 (Col. 9, lines 20-26). The combination of Bessel and Margulis fail to teach data processor transmitting audio or video to digital set top box. The combination of Bessel and Margulis also fail to teach storing a user POD application in memory. Hendricks teaches "a data processor coupled to said POD module interface and capable of transmitting to said digital cable set-top box at least one of an audio signal and a video signal capable of being displayed on a screen of said television set" by microprocessor 104 shown in figure 12A. Hendricks teaches Level A, B and C hardware upgrades 100 each include a microprocessor 104, interactive software 106, processing circuitry 108, bubble memory 112, and a long-term memory device 116. In addition to

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these basic components, the Level B hardware upgrade makes use of an additional telephone modem 120, while the Level C hardware upgrade makes use of an additional CD-ROM storage device 122 (Col. 26, lines 30-37). Hendricks further teaches Level C interactive unit employs a high volume local storage capacity, including compact disc or other random access digital data formats (e.g., CD-ROM 122). This unit allows use of interactive multi-media applications, for example, the use of computer games (Col. 27, lines 23-27). Hendricks teaches claimed "memory coupled to said data processor capable of storing a user POD application program executable by said data processor..." by long-term memory device 116 shown in figure 12A. Hendricks teaches long-term memory device 116 allows each hardware upgrade to internally store data used with each interactive service (Col. 26, lines 55-60). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Bessel and Margulis with the teachings of Hendricks to facilitate storing instructions in memory to control data processor to control operation of RF transceiver. One would have been motivated to make this modification as it is well known in the art to use memory to store operational instructions to be used by the data processor.

As for Claim 4, the combination of Bessel and Margulis are silent on teaching data processor receiving user input signals from digital set top box. Hendricks teaches microprocessor 104 or "data processor" is capable of receiving user input signals from microprocessor 602 in set top terminal 220 or "digital cable set-top box". Hendricks teaches subscriber inputs, entered through the set top terminal keypad or remote

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control, can be transferred to any of the hardware upgrades for processing and responses generated therein can then be sent back to the set top terminal 220 for display. In the preferred embodiment the IR commands are transferred from set top terminal to hardware upgrade (Col. 26, lines 48-54). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Bessel and Margulis with the teachings of Hendricks to facilitate data processor receiving user input signals from digital set top box in order for the data processor to provide the necessary function(s) as requested by the user.

As for Claim 5, the combination of Bessel and Margulis fail to teach digital set top box receiving infrared signals from the user. Hendricks teaches the preferred remote control 900 operates using infrared (IR) signals, with the signals being received by the Infrared (IR) sensor 630 on the front of the set top terminal 220 (Col. 29, lines 35-38). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Bessel and Margulis with the teachings of Hendricks in order for digital set top box to receive infrared signals from the user for the benefit of allowing a user to make function requests from a distance using a remote device.

As for Claim 9, the combination of Bessel and Margulis fail to teach a disk storage device capable of storing said user POD application program. Hendricks teaches "a disk storage device capable of storing said user POD application program" by disclosing Level C interactive unit employs a high volume local storage capacity, including compact disc or other random access digital data formats (e.g., CD-ROM

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122). This unit allows use of interactive multi-media applications. Such applications include, for example, computer games, multi-media educational software, encyclopedias, and other reference volumes (Col. 27, lines 23-29). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Bessel and Margulis with the teachings of Hendricks in order to use a disk storage to store user POD application programs. One would have been motivated to make this modification as it is well known to use disk storage to store large volumes of data.

As for Claim 10, the combination of Bessel and Margulis fail to teach a disk storage device capable of storing at least one of audio files, video files, graphics files, and text files associated with said user POD application program. Hendricks teaches "a disk storage device capable of storing at least one of audio files, video files, graphics files, and text files associated with said user POD application program" by disclosing Level C interactive unit employs a high volume local storage capacity, including compact disc or other random access digital data formats (e.g., CD-ROM 122). This unit allows use of interactive multi-media applications, for example, computer games (Col. 27, lines 23-27). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Bessel and Margulis with the teachings of Hendricks in order to store at least one of audio files, video files, graphics files, and text files associated with said user POD application program. One would have been motivated to make this modification as it is well known to use disk storage to store large volumes of data.

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As for Claim 11, the combination of Bessel and Margulis fail to teach a user POD application program comprising a video game. Hendricks teaches, "a user POD application program further comprises a video game program" by disclosing Level C interactive unit employs a high volume local storage capacity, including compact disc or other random access digital data formats (e.g., CD-ROM 122). This unit allows use of interactive multi-media applications, for example, computer games (Col. 27, lines 23-27). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Bessel and Margulis with Hendricks to facilitate a user POD application program comprising a video game for the benefit allowing a user to play video games without the use of a second device.

As for Claim 12, the combination of Bessel and Margulis fail to teach a user POD application program further comprises an email program. Hendricks teaches "a user POD application program further comprises an email program" by the network controller 214 can act as a central computer and provide intra-set top terminal interactive games, inter-set top terminal interactive games, computer bulletin board type services, message services (Electronic mail) etc. These interactive features are further described below with the interactive services level B menu and the set top terminal hardware upgrade Level B interactive unit (Col. 22, lines 64-67 and Col. 23, lines 1-10). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Bessel and Margulis with the teachings of Hendricks to facilitate a user POD application program further comprises an email program for the

benefit allowing a user send and receive e-mail without the use of a second device (e.g., computer).

Considering Claim 15, the claimed elements of a data processor and memory, corresponds with subject matter mentioned above in the rejection of claim 3, and is likewise treated.

Considering Claim 16, the claimed elements of the data processor is capable of receiving user input signals from said digital cable set-top box, corresponds with subject matter mentioned above in the rejection of claim 4, and is likewise treated.

Considering Claim 17, the claimed elements of user input signals comprise infrared signals detected by an infrared sensor associated with said digital cable set-top box, corresponds with subject matter mentioned above in the rejection of claim 5, and is likewise treated.

As for Claim 21, Bessel fails to teach IP data packets comprising at least AM or FM radio baseband signals. Margulis teaches base station subsystem 512 may communicate with various wide-area networks (such as the Internet) via WAN interface 656. For example, subsystem processor 518 may readily access digital A/V data from the Internet via path 656, WAN interface 658, path 660, communications processor 636, and path 522. Subsystem processor 518 may then process the Internet A/V data, and subsequently provide the processed Internet A/V data through path 522 to communications processor 636 for wireless transmission by RF XMIT/RCVR 640 (Col. 10, lines 23-32). Margulis is silent on the user streaming AM or FM radio broadcast via the Internet. Hendricks teaches the Level D upgrade allows subscribers to receive

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digital radio channels (Col. 27, line 65 – Col. 28, lines 1-9). However, the examiner gives Official Notice that it is notoriously well known in the art to use the Internet to stream AM or FM radio broadcast to client's Internet enabled device. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Bessel, Margulis and Hendricks in order to facilitate receiving AM or FM baseband signals comprised within IP data packets for the benefit of receiving digital radio channels while viewing other programming on the television (Hendricks – Col. 27, lines 66 – Col. 28, lines 1-2).

5. Claims 6-8 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bessel in view of Margulis in view of Hendricks as applied to claims 3 and 15 above, and further in view of Laubach et al. "Laubach" (US 6,081,533).

As for Claim 6, the combination of Bessel, Margulis, and Hendricks fail to teach a user interface coupled to said data processor capable of receiving user inputs from a user input device coupled to said user interface. Laubach teaches a user may choose to include a Universal Serial Bus (USB) connection via USB block 1302. Hence, home electronics (e.g., stereo, HDTV, VCR, camcorder, joystick, mouse, keyboard, phone, USB device, etc.) can interface with the STU via the advanced home interface module 1301. Furthermore, all information (e.g., Ethernet, IEEE 1394, USB, etc.) is converted into ATM cells which are transmitted through the CATV system and later re-converted back as necessary. Thereby, packets from the headend controller can be output from advanced home interface module 1301 as IEEE 1394 or USB; IEEE 1394 or USB data can be input to the STU via the advanced home interface module 1301 (Col. 15, line 55

– Col. 16, line 4). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Hendricks and Margulis with the teachings of Laubach in order to facilitate a user interface coupled to a data processor capable of receiving user inputs from a user input device coupled to a user interface. One would have been motivated to make this modification in order to facilitate interaction with interactive multimedia programs provided by the module.

As for Claim 7, Bessel and Hendricks are silent on the use of a user input device associated with user interface coupled to data processor. Margulis teaches the use of remote controller 310 or “user input device” as a hand-held device that preferably includes, but is not limited to, a remote controller screen 314, remote controls 312, a radio-frequency transmitter/receiver (RF XMIT/RCVR) 318 and an infrared transmitter/receiver (IR XMIT/RCVR) 316. In FIG. 3, remote controls 312 may be used by a viewer to control various components and operating parameters of wireless television system 110. For example, remote controls 312 may be used to control the operation of other components and subsystems in system 110 through a wireless transmission process using either RF XMIT/RCVR 318 or IR XMIT/RCVR 316 (Col. 5, line 60 – Col. 6, line 5). Margulis further teaches remote controller 310 may advantageously transmit wireless radio-frequency control information to subsystem processor 518 through antenna 526, RF XMIT/RCVR 640, and communications processor 636 (Col. 10, lines 43-47). Margulis is silent on teaching the use of a keyboard as a user input device. Laubach teaches a user may choose to include a Universal Serial Bus (USB) connection via USB block 1302. Hence, home electronics

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(e.g., stereo, HDTV, VCR, camcorder, joystick, mouse, keyboard, phone, USB device, etc.) can interface with the STU via the advanced home interface module 1301.

Furthermore, packets from the headend controller can be output from advanced home interface module 1301 as IEEE 1394 or USB; IEEE 1394 or USB data can be input to the STU via the advanced home interface module 1301 (Col. 15, line 55 – Col. 16, line 4). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Hendricks and Margulis with the teachings of Laubach in order to use a keyboard as a user input device for the benefit of allowing users to quickly type in commands, write messages, or send and receive e-mails.

Considering Claim 8, the claimed elements of a user input device comprises a mouse, corresponds with subject matter mentioned above in the rejection of claim 7, and is likewise treated.

Considering Claim 18, the claimed elements of a user interface coupled to said data processor capable of receiving user inputs from a user input device coupled to said user interface, corresponds with subject matter mentioned above in the rejection of claim 6, and is likewise treated.

Considering Claim 19, the claimed elements of a user input device comprises a keyboard, corresponds with subject matter mentioned above in the rejection of claim 7, and is likewise treated.

Considering Claim 20, the claimed elements of a user input device comprises a mouse, corresponds with subject matter mentioned above in the rejection of claim 8, and is likewise treated.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to set-top boxes having wireless transmission capabilities.

U.S. Pat. No. 6,742,188 to Del Castillo

U.S. Pat. No. 6,553,567 to Wugofski et al.

U.S. Pat. No. 6,687,486 to Grzeczowski

U.S. Pat. No. 6,757,913 to Knox

U.S. Pat. No. 6,128,484 to Singkornrat et al.

U.S. Pub. No. 2002/0162112 to Javed

The following patents are cited to further show the state of the art with respect to POD modules and POD host interfaces.

U.S. Pat. No. 6,757,909 to Maruo et al.

U.S. Pat. No. 6,915,531 to Yun

U.S. Pub. No. 2002/0101991 to Bacon et al.

The following patents are cited to further show the state of the art with respect to cable modems and televisions having wireless transmission capabilities.

U.S. Pat. No. 6,931,659 to Kinemura

U.S. Pub. No. 2002/0122137 to Chen et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chris Parry whose telephone number is (571) 272-8328. The examiner can normally be reached on Monday through Friday, 8:30 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner's Initials: CLP
September 15, 2005

Labell
PATENT EXAMINER
AU 2614